

CLAIMS

1. An abrasive solid composed of an organic high polymer matrix and an abrasive material dispersed therein to form a solid mass, wherein
5 said abrasive solid has a tensile strength of 0.6-1.3 MPa and a tear strength of 6-10 N/mm at an ambient temperature of 23°C.

2. The abrasive solid as defined in claim 1, wherein said abrasive solid has a cutting resistance of 19.6-147 N (2-15 kgf), and said cutting
10 resistance is determined by measuring a maximum load applied to a cutter blade having a blade length of 22 mm or more and being pressed down vertically to a specimen of the abrasive solid 20 mm wide at a speed of 7 mm/min so as to sever it into two.

15 3. The abrasive solid as defined in claim 1, wherein said abrasive solid has a hardness of 60 or higher.

4. The abrasive solid as defined in claim 1, wherein said abrasive solid has an abrasion resistance of an abrasion loss in volume of 2-4.5 cm³
20 per 1000 turns.

5. The abrasive solid as defined in claim 1, wherein two or more sections differing from each other in particle size and/or kinds of the abrasive materials are consolidated in the solid.

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6. The abrasive solid as defined in claim 1, wherein at least one ingredient of the organic high polymer matrix is a rubber.

7. The abrasive solid as defined in claim 1, wherein the abrasive material is present in an amount of at least 30% by weight.

5 8. The abrasive solid as defined in claim 1, wherein the abrasive material is present in an amount of at least 50% by weight.

9. An abrasive solid composed of organic high polymer matrices and abrasive materials each dispersed in one of the matrices to form a solid mass, wherein two or more sections differing from each other in particle size and/or kinds of the abrasive materials are consolidated in the solid.

10. The abrasive solid as defined in claim 9, wherein at least one of the sections of said abrasive solid has a cutting resistance of 19.6-147 N (2-15 kgf), and said cutting resistance is determined by measuring a maximum load applied to a cutter blade having a blade length of 22 mm or more and being pressed down vertically to a specimen of each section 20 mm wide at a speed of 7 mm/min so as to sever it into two.

20 11. The abrasive solid as defined in claim 9, wherein at least one of the sections of said abrasive solid has a hardness of 60 or higher.

12. The abrasive solid as defined in claim 9, wherein at least one of the sections of said abrasive solid has an abrasion resistance of an abrasion loss in volume of 2-4.5 cm³ per 1000 turns.

13. The abrasive solid as defined in claim 9, wherein at least one

ingredient of the organic high polymer matrix in the at least one section is a rubber.

14. The abrasive solid as defined in claim 9, wherein the abrasive
5 material is present in an amount of at least 30% by weight in at least one of the sections of said abrasive solid.

15. The abrasive solid as defined in claim 9, wherein the abrasive
material contained in one of the sections is composed of particles having
10 passed a first screen, and the abrasive material contained in the other section is composed of particles having passed a second screen that has openings more than those in the first screen by 30% or more.

16. An abrasive solid composed of an organic high polymer matrix
15 and an abrasive material dispersed therein to form a solid mass, wherein said abrasive solid has a cutting resistance of 19.6-147 N (2-15 kgf), and said cutting resistance is determined by measuring a maximum load applied to a cutter blade having a blade length of 22 mm or more and being pressed down vertically to a specimen of the abrasive solid 20 mm wide at a speed
20 of 7 mm/min so as to sever it into two.

17. The abrasive solid as defined in claim 16, wherein said abrasive solid has a hardness of 60 or higher.

25 18. An abrasive solid composed of an organic high polymer matrix and an abrasive material dispersed therein to form a solid mass, wherein said abrasive solid has a tensile strength of 0.6-1.3 MPa and a tear strength

of 6-10 N/mm at an ambient temperature of 23°C, said abrasive solid has a cutting resistance of 19.6-147 N (2-15 kgf), said cutting resistance is determined by measuring a maximum load applied to a cutter blade having a blade length of 22 mm or more and being pressed down vertically to a specimen of the abrasive solid 20 mm wide at a speed of 7 mm/min so as to sever it into two, said abrasive solid has a hardness of 60 or higher, said abrasive solid has an abrasion resistance of an abrasion loss in volume of 2-4.5 cm³ per 1000 turns, two or more sections differing from each other in particle size and/or kinds of the abrasive materials are consolidated in the solid, and the abrasive material contained in one of the sections is composed of particles having passed a first screen, and the abrasive material contained in the other section is composed of particles having passed a second screen that has openings more than those in the first screen by 30% or more.

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